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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,906	04/21/2004	Joanna Hong Zhang	J6886(C)	5655
201 7590 02/01/2010 UNILEVER PATENT GROUP 800 SYLVAN AVENUE AG West S. Wing ENGLEWOOD CLIFFS, NJ 07632-3100			EXAMINER FISHER, ABIGAIL L	
			ART UNIT	PAPER NUMBER
			1616	
			NOTIFICATION DATE	DELIVERY MODE
			02/01/2010	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte*  
JOANNA HONG ZHANG and MICHAEL CHARLES CHENEY

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Appeal 2009-005746<sup>1</sup>  
Application 10/828,906  
Technology Center 1600

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Decided: January 28, 2010

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Before TONI R. SCHEINER, DEMETRA J. MILLS, and  
FRANCISCO C. PRATS, *Administrative Patent Judges*.

SCHEINER, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 1, 2, 4-6, and 10-12,<sup>2</sup> directed to a personal care composition, and rejected as obvious. We have jurisdiction under 35 U.S.C. § 6(b).

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<sup>1</sup> Heard January 14, 2010.

<sup>2</sup> Claims 3 and 9 have been withdrawn from consideration, and claims 7 and 8 have been canceled (App. Br. 3).

# STATEMENT OF THE CASE

“Structures with conjugated double and triple bonds (pi systems) are particularly vulnerable to generation of chromophoric color bodies” (Spec. ¶ 2). “The invention concerns personal care products having labile ingredients which are prevented from generating aesthetically displeasing color bodies” (*id.* at ¶ 1) “through use of substituted ureas” (*id.* at ¶ 5).

Claims 1 and 2 are representative of the subject matter on appeal:

1. A personal care composition comprising:
  - (i) an unsaturated organic material with at least two olefinic double bonds in conjugated relationship susceptible to degradation into a color bearing substance, the unsaturated material being selected from C<sub>10</sub>-C<sub>50</sub> terpenoids and C<sub>12</sub>-C<sub>48</sub> unsaturated fatty compounds, the C<sub>12</sub>-C<sub>48</sub> compounds being selected from the group consisting of fatty alcohols, fatty acids, fatty acid glycerides, fatty acid salts and combinations thereof;
  - (ii) a substituted urea of general structure (I)



(I)

wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are selected from the group consisting of hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, (R<sub>5</sub>)<sub>n</sub>OH, and mixtures thereof; R<sub>5</sub> is methylene, ethylene, propylene or combinations thereof, and n ranges from 1 to 6; and R<sub>4</sub> is (R<sub>5</sub>)<sub>n</sub>OH; and

- (iii) a cosmetically acceptable carrier.
2. The composition according to claim 1 wherein the substituted urea is hydroxyethyl urea.

The Examiner relies on the following evidence:

Nakatsu	US 5,965,518	Oct. 12, 1999
Rodrigues	US 2002/0100122 A1	Aug. 1, 2002
Rodrigues	US 2004/0266921 A1	Dec. 30, 2004

- (A) Claims 1, 2, 4-6, 10, and 11 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Rodrigues '122 and Nakatsu.
- (B) Claims 1 and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Rodrigues '921 and Nakatsu.

We affirm.

#### ISSUE (A)

Have Appellants shown that the Examiner erred in concluding that one of ordinary skill in the art would have had a reason to include Nakatsu's fragrance compositions in the laundry detergents and fabric softeners disclosed by Rodrigues '122?

#### *Findings of Fact*

FF1 Claim 1 represents the invention in its broadest aspect, and is directed to a composition comprising an unsaturated organic material - a terpenoid or an unsaturated fatty compound - with at least two conjugated olefinic double bonds, and a substituted urea of formula (I). Claim 2 depends from claim 1 and specifies that the substituted urea is hydroxyethyl urea.

FF2 Rodrigues '122 describes "a treatment composition comprising a hydroxy urea or hydroxy amide compound . . . [for] the treatment of a material to reduce wrinkles, impart temporary crease resistance and improve fabric hand (feel), and increase moisture absorbance" (Rodrigues '122, ¶ 2).

FF3 The anti-wrinkle treatment composition may be used directly or may be included in a laundry detergent or fabric softener (Rodrigues '122, ¶ 2).

FF4 Rodrigues '122 teaches that

The treatment composition may contain, in addition to the hydroxy compound, one or more compounds selected from the group containing surfactants; buffers; dyes; electrolytes; builders; modified or unmodified cellulosic compounds; modified or unmodified starch; polymers which are cationic, nonionic or zwitterionic; enzymes; cyclodextrins; silicones; and fragrances.

(Rodrigues '122, ¶ 27.)

FF5 Nakatsu discloses antimicrobial fragrance compositions comprising 3-20% phenolic compounds and 20-80% non-aromatic terpenoids (Nakatsu, col. 2, ll. 53-58).

FF6 Nakatsu's antimicrobial fragrance compositions may be included in laundry detergents and fabric softeners (Nakatsu, col. 9, ll. 64-65).

FF6 According to Nakatsu

Examples of non-aromatic terpenoid compounds include cedrene, cineole, citral, citronellal, citronellol, cymene, paradihydrolinalool, dihydromyrcenol (DH myrcenol), farnesol, geraniol, hexyl cinnamaldehyde, hydroxycitronalol, hydroxycitronellal, isocitral, limonene, linalool, longifolene, menthol, nerol, nerolidiol, phellendrene, terpinene, terpinenol, and tetrahydromyrcenol (TH myrcenol).

(Nakatsu, col. 3, ll. 37-45.)

“Alternatively or additionally, essential oils containing the phenolic compounds and/or the non-aromatic terpenoids as major constituents may be

added, with the final concentrations of the phenolic compounds and the non-aromatic terpenoids being within the range of the invention” (Nakatsu, col. 3, ll. 47-52).

Essential oils including non-aromatic terpenoids as the major constituent include, for example, buchu oil, caraway oil, carrot seed, cedar leaf, citronella oil, citrus oil, copaiba oil, geranium oil, gergamot, lavender oil, mint oil, orange oil, parsley oil, patchouly oil, pine oil, rosemary oil, sage oil, tagette oil, and ylang ylang.

(*Id.* at col. 3, l. 66 to col. 4, l. 4.)

FF7 There is no dispute that at least one of Nakatsu’s suitable non-aromatic terpenoid compounds, phellendrene, has at least two conjugated olefinic double bonds (App. Br. 8; Ans. 4).

#### *Principles of Law*

An invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. . . . [I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

“[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR*, 550 U.S. at 420. As long as some suggestion to combine the elements is provided by the prior art as a whole, the law does not require that they be combined for the reason or advantage contemplated by the inventor. *In re Beattie*, 974 F.2d 1309, 1312 (Fed. Cir. 1992); *In re Kronig*, 539 F.2d 1300, 1304 (CCPA 1976).

*Analysis*

There is no dispute that Rodrigues '122 discloses compositions, including laundry detergents and fabric softeners, containing a hydroxy urea and a fragrance (FF2, FF3, FF4). There is no dispute that Nakatsu discloses fragrances suitable for laundry detergents and fabric softeners which contain non-aromatic terpenoids, at least one of which has at least two conjugated olefinic double bonds (FF7, FF8).

We agree with the Examiner's conclusion that it would have been obvious to combine Rodrigues '122's hydroxy urea and Nakatsu's fragrances (all of which contain at least one non-aromatic terpenoid) in a single composition (Ans. 5), for example, a laundry detergent or fabric softener. As the Examiner explains, both "references teach providing a fragrance . . . in a cosmetic composition . . . [and] [t]he fragrance compositions of Nakatsu et al. . . . provide the added bonus of not only to impart a pleasing odor but as well exhibit antimicrobial activity" (Ans. 9-10).

We are not persuaded otherwise by Appellants' argument that the claimed invention is directed to a problem not recognized by either of the prior art references (App. Br. 6). It is well settled that elements of the prior art need not be combined for the same reason or advantage addressed by Appellants, where, as here, the Examiner has identified an alternative reason, based on the prior art, to combine the required elements.

Nor are we persuaded by Appellants' argument that "[n]o disclosure is presented regarding the constituents of [Rodrigues '122's] perfume" (App. Br. 7). Again, Rodrigues '122 is directed to compositions, including laundry detergents and fabric softeners, which contain a hydroxy urea and fragrance.

Nakatsu discloses anti-microbial fragrances containing non-aromatic terpenoids, suitable for laundry detergents and fabric softeners. Appellants have not explained why it wouldn't have been obvious to add Nakatsu's fragrances to Rodrigues '122's compositions.

Finally, Appellants contend that Nakatsu discloses a large number of non-aromatic terpenoids and essential oils containing non-aromatic terpenoids (App. Br. 7-8), but the Examiner improperly focuses on phellendrene, "the only unambiguously identified unsaturated organic material with at least two olefinic conjugated double bonds" (*id.* at 8). We are not persuaded by this argument either. All of Nakatsu's fragrances contain non-aromatic terpenoids, in the form of isolated compounds or as components of essential oils, and there are a mere forty or so of these listed, including the essential oils. We agree with the Examiner that it would have been obvious to add any one of them, including phellendrene, to Rodrigues '122's laundry detergents and fabric softeners.

#### *Conclusions of Law*

Appellants have not shown that the Examiner erred in concluding that one of ordinary skill in the art would have had a reason to include Nakatsu's fragrance compositions in the laundry detergents and fabric softeners disclosed by Rodrigues '122.

The rejection of claim 1 as unpatentable over Rodrigues '122 and Nakatsu is affirmed. Claims 2, 4-6, 10, and 11 fall with claim 1 as they were not separately argued. 37 C.F.R. § 41.37(c)(1)(vii) (2006).



## ISSUE (B)

Have Appellants shown that the Examiner erred in concluding that one of ordinary skill in the art would have had a reason to include Nakatsu's fragrances in the lotions and hair care products disclosed by Rodrigues '921?

### *Findings of Fact*

FF8 Rodrigues '921 discloses "a method for maintaining hydration of an aqueous-based polymer composition by admixing said aqueous-based polymer composition with a hydroxyalkyl urea" (Rodrigues '921, ¶ 13).

FF9 The aqueous-based polymer compositions include gels, creams, and lotions, which can be applied to fabric, skin, or hair (Rodrigues '921, page 7).

FF10 The compositions may include fragrances and anti-bacterial agents (Rodrigues '921, ¶ 35).

FF11 Nakatsu exemplifies five fragrance compositions, all of which have distinctive odor profiles. According to Nakatsu, AMPAT-C, which contains phellendrene, "is a spicy floral and lavandacious fragrance with a fresh agrumen accord" (Nakatsu, col. 4, ll. 20-21). In addition, AMPAT-C "exhibited strong antimicrobial activity against *Staphylococcus aureus* ATCC 6538 and *Staphylococcus epidermidis* ATCC 12228," and "to a lesser extent . . . against *E. coli* ATCC 11229" (Nakatsu, col. 6, ll. 14-19).

FF12 In addition to laundry detergents and fabric softeners, Nakatsu's fragrances may be included in skin lotions and hair car products (Nakatsu, col. 9, ll. 64-65).

### *Analysis*

The Examiner's rationale for combining the teachings of Rodrigues '921 and Nakatsu is essentially the same as that of the previous rejection,

with the additional observation that “a fragrance composition that possesses antimicrobial activity would be advantageous” (Ans. 6-8).

Appellants acknowledge “that there might be motivation to select a perfume that has antimicrobial activity for incorporation into Rodrigues [‘921’], but contend that “the Examiner’s motivation argument has flaws . . . [in] that Nakatsu et al. cannot attribute any antimicrobial action to an unsaturated organic material having at least two olefinic conjugated double bonds” (App. Br. 10). Appellants contend that “[t]here are countless fragrance constituents available to the perfume chemist. Very few meet the conjugated double bond criteria. There would be no particular motivation to select these particular structures” (*id.* at 11). Finally, Appellants contend that Nakatsu’s fragrance formulation AMPAT-C, which contains phellendrene, “is only modestly effective against a significant microbe which is *E. coli*” (*id.*).

We are not persuaded by these arguments. Again, all of Nakatsu’s fragrances contain non-aromatic terpenoids, in the form of isolated compounds or as components of essential oils, suitable for use in lotions and hair care products (FF12). There are a mere forty or so of these listed, including the essential oils. Appellants have not explained why it would not have been obvious to add any of them, including the exemplified distinctive fragrance formulations, to Rodrigues ‘921’s lotions and hair care products, which can contain fragrances, as well as anti-microbial agents (FF10).

#### *Conclusions of Law*

Appellants have not shown that the Examiner erred in concluding that one of ordinary skill in the art would have had a reason to include Nakatsu’s fragrances in the lotions and hair care products disclosed by Rodrigues ‘921.

The rejection of claim 1 as unpatentable over Rodrigues '921 and Nakatsu is affirmed. Claim 12 falls with claim 1 as it was not separately argued. 37 C.F.R. § 41.37(c)(1)(vii) (2006).

SUMMARY

The rejection of claims 1, 2, 4-6, 10, and 11 under 35 U.S.C. § 103(a) as unpatentable over Rodrigues '122 and Nakatsu is affirmed.

The rejection of claims 1 and 12 under 35 U.S.C. § 103(a) as unpatentable over Rodrigues '921 and Nakatsu is affirmed.

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED

alw

UNILEVER PATENT GROUP  
800 SYLVAN AVENUE  
AG WEST S. WING  
ENGLEWOOD CLIFFS, NJ 07632-3100